

YPO-103
(80215-0103)

09/194,051

AF/3621

BOX AF

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES



On re Patent Application of

Akira SUGIYAMA

Art Unit: 3621

Serial No. 09/194,051

Examiner: C. Hewitt

Filed: March 25, 1999

For: UNIQUE TIME GENERATING DEVICE AND AUTHENTICATING

TRANSMITTAL OF APPEAL BRIEF

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BOX AF

Commissioner for Patents
Washington, D.C. 20231

Sir:

Three copies of an Appellant's Brief on Appeal for the above-referenced application are being filed herewith. The Commissioner is hereby authorized to charge \$160.00 to Deposit Account 18-0013 to cover the requisite fee under 37 C.F.R. 1.16 or 1.17 which may be required, or to credit any overpayment.

The Notice of Appeal for this application was filed on May 15, 2002.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "B. Dutton".

DATE: July 15, 2002

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Art Unit: 3621

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APPEAL BRIEF

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Sir:

This is an Appeal Brief under Rule 192 appealing the final decision of the Examiner dated January 17, 2002 (Paper No. 16). Each of the topics required by Rule 192 is presented herewith and is labeled appropriately.

I. Real Party In Interest

Akira SUGIYAMA is the real party in interest of the present application.

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II. Related Appeals And Interferences

There are no appeals or interferences related to the present application of which Appellant is aware.

III. Status of Claims

Claims 1-39 were originally filed in this application. No claims have been canceled. Thus, claims 1-39 are currently pending.

No claims have been allowed. Accordingly, the Appellant hereby appeals the final rejection of claims 1-39, which are presented in the Appendix.

IV. Status of Amendments

Subsequent to the first final rejection of July 27, 2001, an Amendment and Request for Reconsideration was filed on September 26, 2001.

Also subsequent to the first final rejection of July 27, 2001, a Petition Under 37 C.F.R. § 1.181 To Request Withdrawal Of

The Final Office Action Of July 27, 2001 was filed on September 7, 2001. That Petition challenged the use of "Official Notice" made within the first final rejection of July 27, 2001.

The Advisory Action of October 23, 2001 maintained the use of "Official Notice" and denied entry of the Amendment and Request for Reconsideration filed on September 26, 2001.

In response to the Petition Under 37 C.F.R. § 1.181 of September 7, 2001, the second Final Office Action was mailed on January 17, 2002.

There has been not amendment subsequent to the second Final Office Action of January 17, 2002.

V. Summary of the Invention

The present invention relates to an authentication-data issuing system, the embodiment of which is depicted throughout the specification as originally filed. Examples are provided hereinbelow.

For example, figure 1 shows authentication-data issuing system that includes a plurality of computers 1,2,3 connected with each other via communication lines. The one of the plurality of computers 1,2,3 functions as a master computer 1 (page 6, lines 6-10). As shown in figure 6, the master computer 1 includes a unique time generating device 6, transmitter means 13 and register means 21.

For example, figure 2 shows the unique time generating device 6 includes time keeping means 9 and accumulating means 10. As shown in figure 6 transmitter means 13 provides communication between the master computer 1 and another of the computers subservient to the master computer.

The summary provided hereinabove is not intended to limit the scope of invention.

VI. References of Record

In the final rejection of January 17, 2002, the Examiner relied upon:

U.S. Patent No. 5,933,625 issued to Sugiyama;
U.S. Patent No. 5,502,765 issued Ishiguro et al. (Ishiguro);
Rosenberg, "Dictionary of Computers, Information Processing
& Telecommunications";
Petri, *An Introduction to Smartcards* (Petri).

VII. Issues

The issues presented for consideration in this appeal are as follows:

Whether the Examiner erred in rejecting claims 4, 10 and 16-19 under 35 U.S.C. 112, second paragraph.

Whether the Examiner erred in rejecting claims 1-39 under the judicially created doctrine of obviousness-type double patenting as being allegedly unpatentable over claims 1-7 of U.S. Patent No. 5,933,625 issued to Sugiyama in view of U.S. Patent No. 5,502,765 issued Ishiguro et al. (Ishiguro) and the Examiner's Official Notice.

These issues will be discussed hereinbelow.

VIII. Grouping of Claims

For purposes of the issues presented by this appeal:

Claims 1-39 stand or fall together.

The arguments set forth in the following section provide reasons why this group is considered patentable, 37 C.F.R. 1.192 (c) (7) .

IX. Arguments

In the second Final Office Action of January 17, 2002:

The Examiner rejected claims 4, 10 and 16-19 under 35 U.S.C. §112, second paragraph.

The Examiner rejected claims 1-39 under the judicially created doctrine of obviousness-type double patenting as being allegedly unpatentable over claims 1-7 of U.S. Patent No. 5,933,625 issued to Sugiyama in view of U.S. Patent No.

5,502,765 issued Ishiguro et al. (Ishiguro) and the Examiner's Official Notice.

For at least the following reasons, Appellant submits that this rejection is both technically and legally unsound and should therefore be reversed.

General Matters

M.P.E.P. §707.07(f) states that "the importance of answering such arguments is illustrated by *In re Herrmann*, 261 F.2d 598, 120 USPQ 182 (CCPA 1958) where the applicant urged that the subject matter claimed produced new and useful results. The court noted that since applicant's statement of advantages was not questioned by the examiner or the Board of Appeals, it was constrained to accept the statement at face value and therefore found certain claims to be allowable. See also *In re Soni*, 54 F.3d 746, 751, 34 USPQ2d 1684, 1688 (Fed Cir. 1995) (Office failed to rebut applicant's argument)."

New non-final Office Action

Claims 1, 2, 4, 5, 23 and 24 are independent claims. No amendment has been previously made to these claims. Accordingly,

if prosecution of the above-identified application is reopened, then a new **non-final** Office Action is respectfully requested. See M.P.E.P. §1208.02.

Note

The second Final Office Action objected to claims 16-22 because the word "mater" is allegedly misspelled. While a response to this claim objection is generally not an issue that is subject to appeal, M.P.E.P. §706.01, please note that the claims have been previously amended within the Amendment and Request for Reconsideration of September 26, 2001 to change the spelling of "mater" to -matter-.

***The Examiner erred in rejecting claims 4, 10 and 16-19 under
35 U.S.C. §112, second paragraph.***

The second Final Office Action contends that the claim 4 term "peculiar" is vague and indefinite.

"The relevant statute, 35 U.S.C. Section 112 Para. 2, requires that the claims 'particularly point out and distinctly

claim the subject matter which the applicant regards as his invention.' The operative standard for determining whether this requirement has been met is 'whether those skilled in the art would understand what is claimed when the claim is read in light of the specification.'" *Beachcombers v. Wildewood Creative Prods., Inc.*, 31 USPQ2d 1653, 1656 (Fed. Cir. 1994).

Use of the term "peculiar"

Regarding the use of the term "peculiar," it is submitted that this usage is clear and definite. Specifically, claim 4 sets forth computers subservient to the master computer that comprises issuer means for creating and issuing unique authentication data, peculiar to the subservient computer, on the basis of an elapsed time measurement indicated by the unique time generating device.

According to page 965 of "*The American Heritage Dictionary of the English Language*", published 1976, the term "peculiar" is defined as "belonging distinctively or especially to one person, group, or kind." Page 965 of "*The American Heritage Dictionary of the English Language*" has been provided as an attachment to the Amendment and Request for Reconsideration of September 26, 2001.

Nevertheless, "a patentee can be his own lexicographer provided the patentee's definition, to the extent it differs from the conventional definition, is clearly set forth in the specification." *Beachcombers v. Wildewood Creative Prods., Inc.*, 31 USPQ2d 1653, 1656 (Fed. Cir. 1994).

The specification as originally filed describes, for example, subservient computers 2 being subservient to master computer 1 (figure 1). The specification as originally filed further provides that subservient computers 2 issue unique additional authentication data, and that this unique additional authentication data issued by subservient computers 2 belongs distinctly to subservient computers 2 (page 17, lines 20-23).

The specification as originally filed provides similar descriptions for subservient computers 3, subservient computers 4, and subservient computers 5. Thus, the use of the term "peculiar" is clear and definite.

The claim language "is not construed in a lexicographic vacuum, but in the context of the specification and drawings."

Toro Co. v. White Consolidated Industries Inc., 53 USPQ2d 1065, 1069 (Fed. Cir. 1999). As shown above, the claim language has been clearly set forth in the specification.

Use of the term "various"

Regarding the use of the term "various," while not conceding the propriety of this rejection, and in order to further the prosecution of the application, the claims have been previously amended within the Amendment and Request for Reconsideration of September 26, 2001. Thus, the term "various," is not present within claims 10 and 16-19.

Withdrawal of these rejections is respectfully requested.

The Examiner erred in rejecting claims 1-39 under the
judicially created doctrine of obviousness-type double
patenting as being allegedly unpatentable over claims
1-7 of U.S. Patent No. 5,933,625 issued to Sugiyama in
view of U.S. Patent No. 5,502,765 issued Ishiguro et
al. (Ishiguro) and the Examiner's Official Notice.

This rejection is respectfully traversed for at least the following reasons.

Double-patenting, generally

"A double patenting rejection must rely on a comparison with the claims in an issued or to be issued patent" (emphasis added). M.P.E.P. §804 III, 8th Edition, August 2001.

Claims 1-39

In comparing claims 1-7 of Sugiyama (U.S. Patent No. 5,933,625) with the claims present within the above-identified application, the second Final Office Action admits that claims 1-7 of Sugiyama fail to teach "time" renewal.

Yet, the second Final Office Action contends, without providing any supporting evidence, that "it would have been obvious to apply "time" renewal means to the system and store these renewals in the system in order to further the life of the system and facilitate transactions whose cycle extends beyond the initial fixed time period.

Because this contention of obviousness is without any

supporting evidence, the contention is conclusory at best. Note that the teachings, suggestions or incentives supporting the obviousness-type double patenting rejection must be clear and particular. Broad conclusory statements, standing alone, are not evidence. *In re Dembiczak*, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999) (reversal of double patenting rejections).

"When the PTO asserts that there is an explicit or implicit teaching or suggestion in the prior art, the PTO must produce supporting references" (emphasis added). *In re Dillon*, at 1348 (Fed. Cir. 1989). Instead, these unsupported assertions and contention amount to nothing more than conclusions that are personal in nature, and is not evidence of obviousness.

Here, claims 1-7 of Sugiyama and Ishiguro do not contain a sufficient teaching of how to obtain the desired result, or that the claimed result would be obtained if certain directions were pursued. "Obvious to try" is not the standard under §103. *In re O'Farrell*, 7 USPQ2d 1673, 1680 (Fed. Cir. 1988).

Referring to figure 1 of the Sugiyama patent the second Final Office Action contends that as the central computer serves

as the controller and primary processing reference for a plurality of subordinate computers, all other computers should be synchronized in accordance with the managerial computer in order to maintain system integrity.

But as noted hereinabove, "a double patenting rejection must rely on a comparison with the claims in an issued" (emphasis added). M.P.E.P. §804 III, 8th Edition, August 2001. Thus, the referral to figure 1 of the Sugiyama patent within this double-patenting rejection is improper.

The second Final Office Action makes a particular note that Ishiguro does not specify nor utilize a verification approach that relies upon a particular time keeping method. To make up for this deficiency within Ishiguro, the second Final Office Action urges that the method for account settlement via IC cards is a method of "time keeping" independent and would work equally well whether using Greenwich time or the "unique" time approach put forth by the Applicant (U.S. Patent No. 5,933,625).

Again note that "a double patenting rejection must rely on a comparison with the claims in an issued" (emphasis added).

M.P.E.P. §804 III, 8th Edition, August 2001. Thus, the referral to the Sugiyama patent within this double-patenting rejection for the teaching of the verification approach missing in Ishiguro is improper.

The second Final Office Action admits that claims 1-7 of Sugiyama fail to teach the registering means.

The second Final Office Action admits that claims 1-7 of Sugiyama fail to teach appending new data to existing data.

The second Final Office Action admits that claims 1-7 of Sugiyama fail to teach IC cards and IC card applications.

The second Final Office Action admits that claims 1-7 of Sugiyama fail to teach card verification.

The second Final Office Action admits that claims 1-7 of Sugiyama fail to teach data collection.

The second Final Office Action admits that claims 1-7 of

Sugiyama fail to teach the data updates.

The second Final Office Action admits that claims 1-7 of Sugiyama fail to teach storage of time data.

Please note that these admissions of what is not present are made within the context of a double-patenting rejection, and not an obviousness-type rejection under 35 U.S.C. §103.

The second Final Office Action admits that Ishiguro and claims 1-7 of Sugiyama, either individually or as a whole, fail to teach the system in terms of specific commerce applications of an IC or smart card. Yet, the second Final Office Action takes "Official Notice" that IC or smart cards that are used in electronic money applications or monetary transactions and that interact with gaming, banking or travel computers are well-known in the art of online or offline electric commerce.

The second Final Office Action takes "Official Notice" that that distributive business systems are "well-known" and widely used.

that the reduction in computing costs is "well-known."

The second Final Office Action takes "Official Notice" that that the increase in processing speed has lead to a paradigm shift away from mainframes is "well-known."

The second Final Office Action contends that it would have been obvious to have the system's central, main, supervisor, managerial . . . etc. computer to take on the role of "official time-keeper, without providing any supporting evidence.

Please note again that these assertions and contentions of what is "well-known" and what is "Officially noticed" are made within the context of a double-patenting rejection, and not an obviousness-type rejection under 35 U.S.C. §103.

Although the second Final Office Action rejects the claims under the judicially created doctrine of obviousness-type double patenting, the second Final Office Action is replete with statements regarding what Sugiyama and Ishiguro fail to teach. To make up for these deficiencies, the second Final Office Action submits unsupported assertions to what was well known. However,

these unsupported assertions amount to nothing more than conclusions that are personal in nature.

As a rule, "assertions of technical facts in areas of esoteric technology must always be supported by citation to some reference work recognized as standard in the pertinent art and the appellant given, in the Patent Office, the opportunity to challenge the correctness of the assertion or the notoriety or repute of the cited reference." (Citations omitted). *In re Pardo and Landau*, 214 USPQ 673, 677 (CCPA 1982).

Moreover, the procedures established by Title 37 of the Code of Federal Regulations expressly entitle the Applicant to an Examiner's affidavit upon request. Specifically, "when a rejection in an application is based on facts within the personal knowledge of an employee of the Office, the data shall be as specific as possible, and the reference must be supported, when called for by the applicant, by the affidavit of such employee, and such affidavit shall be subject to contradiction or explanation by the affidavits of the applicant and other persons." 37 C.F.R. §1.104(d)(2).

If a reference or Examiner's affidavit is not provided, the assertion **must be withdrawn**. See M.P.E.P. §2144.03, 8th Edition, August 2001.

Objective evidence or an Examiner's affidavit to support the use of Official Notice or what is well known **has been previously requested** in the Amendment and Request for Reconsideration filed on July 16, 2001 in response to the non-final Office Action of January 17, 2001, and again in the Amendment and Request for Reconsideration filed on September 26, 2001 in response to the First Final Office Action of July 27, 2001. **But in those instances, the requested evidence or affidavit was not forthcoming** in response to the above-noted requests. See, for example, the Advisory Action of Paper No. 13, mailed on October 23, 2001.

A Petition Under 37 C.F.R. §1.181 To Request Withdrawal Of The Final Office Action Of July 27, 2001 was filed on September 7, 2001. That Petition requested withdrawal of the First Office Action of July 27, 2001 by challenging the use of "Official notice" and the assertions of "well-known" features made therein.

In response to the Petition Under 37 C.F.R. §1.181 of September 7, 2001, the second Final Office Action was mailed on January 17, 2002. Within the second Final Office Action, the Examiner provided Rosenberg and Petri for the challenged use of "Official notice" for the features deficient within claims 1-7 of Sugiyama and Ishiguro contended to be "well-known".

In response to the use of Rosenberg, Rosenberg is merely a reference that arguably provides dictionary meanings for a few terms within the processing art. Nevertheless, Rosenberg fails to disclose, teach or suggest the challenged use of "Official notice" for the features deficient within claims 1-7 of Sugiyama and Ishiguro contended to be "well-known".

Specifically, Rosenberg fails to disclose, teach or suggest a system in terms of specific commerce applications of an IC or smart card.

Rosenberg fails to disclose, teach or suggest that the reduction in computing costs is "well-known."

Rosenberg fails to disclose, teach or suggest that the

increase in processing speed has lead to a paradigm shift away from mainframes is "well-known."

Rosenberg fails to disclose, teach or suggest that it would have been obvious to have the system's central, main, supervisor, managerial . . . etc. computer to take on the role of "official time-keeper."

In response to the use of Petri, please note that Petri is not prior art to the Applicant's invention. Specifically, Petri arguably has a copyright date sometime within the year 1998. However, the above-identified application was filed under 35 U.S.C. §371 and 37 C.F.R. §§1.494 or 1.495 having an International filing date of March 24, 1997 and a priority date of March 24, 1997. See M.P.E.P §201.13(b), 8th Edition, August 2001.

But the support for the contended use of "Official notice" or the contended "well-known" features deficient within Ishiguro and claims 1-7 of Sugiyama must have existed at the time the claimed invention was made (emphasis added). *In re Merck & Co., Inc.*, 231 USPQ 375, 379 (Fed. Cir. 1986).

Because Petri is not prior art against the above-identified application, and it is unnecessary to further characterize Petri within this Appeal Brief.

Notwithstanding, Petri fails to disclose, teach or suggest that the reduction in computing costs is "well-known."

Petri fails to disclose, teach or suggest that the increase in processing speed has lead to a paradigm shift away from mainframes is "well-known."

Petri fails to disclose, teach or suggest that it would have been obvious to have the system's central, main, supervisor, managerial . . . etc. computer to take on the role of "official time-keeper."

As shown above, no reference or Examiner's affidavit has been provided to support the challenged use of "Official notice" for the features deficient within claims 1-7 of Sugiyama and Ishiguro contended to be "well-known". Accordingly, the use of "Official notice" made within the second Final Office Action **must**

be withdrawn. See M.P.E.P. §2144.03, 8th Edition, August 2001.

This situation is similar to *Ex parte Natale* wherein the use of Official notice was challenged for evidentiary support. But in spite of this challenge, the Examiner maintained his position. As a result, the Board of Patent Appeals and Interferences concluded that the Examiner's failure to provide objective evidence to support the challenged officially noticed fact constituted clear and reversible error. *Ex parte Natale*, 11 USPQ2d 1222, 1227-1228 (Bd. Pat. App. & Int. 1989).

In addition to the arguments made hereinabove, these assertions and contentions also amount to nothing more than an "obvious-to-try" situation. Specifically, "an 'obvious-to-try' situation exists when a general disclosure may pique the scientist's curiosity, such that further investigation might be done as a result of the disclosure, but the disclosure itself does not contain a sufficient teaching of how to obtain the desired result, or that the claimed result would be obtained if certain directions were pursued." *In re Eli Lilly & Co.*, 14 USPQ2d 1741, 1743 (Fed. Cir. 1990). Moreover, "an invention is 'obvious to try' where the prior art gives either no indication

of which parameters are critical or no direction as to which of many possible choices is likely to be successful." *Merck & Co. Inc. v. Biocraft Laboratories Inc.*, 10 USPQ2d 1843, 1845 (Fed. Cir. 1989).

In addition, "it is impermissible, however, simply to engage in a hindsight reconstruction of the claimed invention, using the applicant's structure as a template and selecting elements from references to fill the gaps. The references themselves must provide some teaching whereby the applicant's combination would have been obvious" (citations omitted). *In re Gorman*, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991). See also *In re Dembiczak*, 50 USPQ2d 1614, 1616 (Fed. Cir. 1999) (rejection based upon hindsight is reversed).

Petri is not deemed prior art. In addition, Sugiyama, Ishiguro, Rosenberg and Petri, either individually or as a whole, fail to disclose, teach or suggest at least the above-noted features of the claimed invention at the time the invention was made, and therefore, do not render the invention obvious.

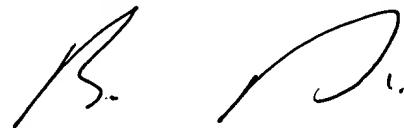
X. Conclusion

The claims are considered allowable for the same reasons discussed above, as well as for the additional features they recite, and particularly in light of Sugiyama, Ishiguro, Rosenberg and Petri.

In view of the foregoing, it is submitted that the final rejection of claims 1-39 is improper and should not be sustained.

Therefore, a reversal of the final rejection of January 17, 2002 as to claims 1-39 is respectfully requested.

Respectfully submitted,



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DATE: July 15, 2002

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XI. APPENDIX

Claims on Appeal

1. An authentication-data issuing system based on unique time, said authentication-data issuing system including a plurality of computers connected with each other via communication lines with one of said computers set to function as a master computer, said master computer comprising:

a unique time generating device including time keeping means for sequentially outputting unit time values at predetermined intervals over a preset time-measuring period that begins at a given start point on a selected date and terminates at a given future end point and accumulating means for sequentially accumulating said unit time values output by said time keeping means so as to constantly measure a changing elapsed time within the time-measuring period;

transmitter means for, during communication between said master computer and another of the computers subservient to said master computer, transmitting, from said master computer to the subservient computer, authentication data based on an elapsed time measurement, corresponding to a given time point, indicated by said unique time generating device; and

register means for receiving and registering an issuance history of unique authentication data created and issued by said subservient computer imparting additional data, unique to said subservient computer, to the authentication data transmitted by said master computer.

2. An authentication-data issuing system based on unique time, said authentication-data issuing system including a plurality of computers connected with each other via communication lines with one of said computers set to function as a master computer, said master computer including a unique time generating device including time keeping means for sequentially outputting unit time values at predetermined intervals over a preset time-measuring period that begins at a given start point on a selected date and terminates at a given future end point and accumulating means for sequentially accumulating said unit time values output by said time keeping means so as to constantly measure a changing elapsed time within the time-measuring period,

each of the computers subservient to said master computer comprising:

receiver means for, during communication with said master computer, receiving authentication data based on an elapsed time

measurement, corresponding to a given time point, indicated by said unique time generating device of said master computer;

issuer means for creating and issuing unique authentication data by imparting additional data, unique to said subservient computer, to the authentication data received via said receiver means from said master computer; and

transmitter means for transmitting, to said master computer, an issuance history of the unique authentication data created and issued by said issuer means.

3. An authentication-data issuing system as recited in claim 2 wherein said issuer means in each of the subservient computers includes imparting means for imparting the additional data, unique to said subservient computer, to the received authentication data, and said imparting means includes a unique time generating device that includes time keeping means for sequentially outputting unit time values at predetermined intervals over a preset time-measuring period that begins at a given start point on a selected date and terminates at a given future end point and accumulating means for sequentially accumulating said unit time values output by said time keeping

means so as to constantly measure a changing elapsed time within the time-measuring period, and

wherein said unique time generating device in said imparting means indicates elapsed time measurements over the time-measuring period that is different from the time-measuring periods of the unique time generating devices provided in said master computer and other subservient computers and creates and issues unique authentication data peculiar to said subservient computer.

4. An authentication-data issuing system based on unique time, said authentication-data issuing system including a plurality of computers connected with each other via communication lines with one of said computers set to function as a master computer, each of the computers subservient to said master computer comprising:

a unique time generating device including time keeping means for sequentially outputting unit time values at predetermined intervals over a preset time-measuring period unique to said computer that begins at a given start point on a selected date and terminates at a given future end point and accumulating means for sequentially accumulating said unit time values output by said time keeping means so as to constantly measure a changing elapsed time within the time-measuring period;

issuer means for creating and issuing unique authentication data, peculiar to said subservient computer, on the basis of an elapsed time measurement indicated by said unique time generating device; and

transmitter means for transmitting, to said master computer, an issuance history of the unique authentication data created and issued by said issuer means.

5. An authentication-data issuing system based on unique time, said authentication-data issuing system including a plurality of computers connected with each other via communication lines with one of said computers set to function as a master computer, each of the computers subservient to said master computer comprising a unique time generating device including time keeping means for sequentially outputting unit time values at predetermined intervals over a preset time-measuring period unique to said computer that begins at a given start point on a selected date and terminates at a given future end point and accumulating means for sequentially accumulating said unit time values output by said time keeping means so as to constantly measure a changing elapsed time within the time-measuring period,

said master computer, exercising general control of the subservient computers, including register means for receiving and registering an issuance history of data created and issued by each of said subservient computers on the basis of an elapsed time measurement indicated by said unique time generating device of said subservient computer.

6. An authentication-data issuing system as recited in claim 3 wherein said master computer functions as an original supplier of unique time to said subservient computers so that said unique time generating devices of said subservient computers are activated to indicate elapsed time measurements within their respective preset time-measuring periods different from each other.

7. An authentication-data issuing system as recited in claim 3 wherein said master computer functions as an original supplier of unique time to said subservient computers so that said unique time generating devices of said subservient computers are activated to indicate elapsed time measurements within their respective preset time-measuring periods different from each other, and each of the computers that are immediately subservient

to said master computer is a second-level computer that functions as a secondary supplier of unique time data to third-level computers subservient to said second-level computer so that the unique time generating devices of said third-level computers are activated to indicate elapsed time measurements within their respective preset time-measuring periods different from each other.

8. An authentication-data issuing system as recited in claim 1 wherein said master computer includes storage means for storing data on said unique time generating device of each of the subservient computers which include data indicative of the time-measuring period of said unique time generating device, or

data on attributes of said unique time generating devices of said master computer and each of said subservient computers, or

unique additional data to be imparted, by each of said subservient computers, to the authentication data received from said master computer.

9. An authentication-data issuing system as recited in claim 1 wherein the unique authentication data created and issued by each of said subservient computers is transmitted to and used by one

or more other subservient computers under control of said master computer every time a transaction involving use of the unique authentication data is performed.

10. An authentication-data issuing system as recited in claim 1 wherein the unique authentication data created and issued by each of said subservient computers includes transmitted information to be transmitted to one or more other subservient computers under control of said master computer, said transmitted information including any of information representative of nature of a transaction, merchandise, settlement of account and credit standing.

11. A recording media having stored thereon unique authentication data created by any one of said subservient computers as recited in claim 1, said recording media being issued by said subservient computer.

12. A recording media as recited in claim 11 which comprises a floppy disk, IC card, magnetic card or writable CD-ROM.

13. A recording media as recited in claim 11 where the unique authentication data stored thereon includes any of monetary information, information on credit loan, money information indicative of a current balance of deposit or saving in a particular account, and information indicative of permission or refusal of use of an amusement part, game house, recreational facility, a railroad, bus, ship, airplane, telephone, facsimile, automatic vending machine or the like.

14. An authentication-data issuing system as recited in claim 1 wherein said master computer is a host computer of a central bank exercising general control of banking operations and said subservient computers are computers of banking agencies including city banks, local banks and credit banks under control of the host computer of the central bank, and wherein a transaction including money supply, settlement, loaning, money changing or payment into account, between any one of the banking agencies and a customer is performed on the basis of unique authentication data created and issued for each transaction.

15. An authentication-data issuing system as recited in claim 1 wherein said master computer is a host computer of a main office

of a banking agency exercising general control of a plurality of branches, local offices and the like of the banking agency and said subservient computers are computers installed in the main office, branches and local offices of the banking agency, and wherein a transaction including money supply, settlement, loaning, money changing or payment into account, between any one of the subservient computers and a customer is performed on the basis of unique authentication data created and issued for each transaction.

16. An authentication-data issuing system as recited in claim 1 wherein said matter computer is a host computer of a main office exercising general control of an organization including a company or corporation and said subservient computers are computers for use at stations or by constituent members of the organization, and wherein an operation to be effected by each of the stations or constituent members is performed on the basis of unique authentication data created and issued by the corresponding subservient computer for each operation.

17. An authentication-data issuing system as recited in claim 1 wherein said matter computer is a host computer of an

administrative organ exercising general control of administrative affairs and said subservient computers are computers for use at stations or by constituent members of the administrative organ, and wherein an operation to be effected by each of the stations or constituent members is performed on the basis of unique authentication data created and issued by the corresponding subservient computer for each operation.

18. A recording media as recited in claim 11 wherein said matter computer is a host computer of a transportation company exercising general control of operations for issuing tickets including an ordinary passenger ticket, railroad and ship tickets, coupon ticket, commuter pass and airline ticket and said subservient computers are computers contained in vending machines installed in a station, airlines, shipping company, tourist bureau, convenience store and the like, said recording media being employed as the ticket issued by any one of the vending machines and having stored thereon unique authentication data that is created by said subservient computer of the vending machine every time the ticket is used.

19. A recording media as recited in claim 11 wherein said matter computer is a host computer exercising general control of operations for issuing prepaid cards for using a railroad, ship, airplane, pachinko game machine, telephone, amusement park and the like and said subservient computers are computers contained in vending machines for issuing the prepaid cards, said recording media being employed as the prepaid card issued by any one of the vending machines and having stored thereon unique authentication data that is created by said subservient computer of the vending machine every time the ticket is used.

20. A recording media as recited in claim 11 wherein said matter computer is a host computer of a central bank exercising general control of operations for issuing electronic money and said subservient computers are computers contained in money issuing machines for issuing electronic money to users, said recording media being employed as the electronic money issued by any one of the money issuing machines and having stored thereon unique authentication data that is created by said subservient computer of the money issuing machine every time the electronic money is used.

21. A recording media as recited in claim 11 wherein said matter computer is a host computer of an administrative organ exercising general control of public services to be provided to individual residents and said subservient computers are computers contained in card issuing machines for issuing personalized ID cards that are to be used by the individual residents to get the public services, said recording media being employed as the ID card issued by any one of the card issuing machines and having stored thereon unique authentication data that is created by said subservient computer of the vending machine every time the ID card is used.

22. A recording media as recited in claim 11 wherein said matter computer is a host computer exercising general control of operations of a banking agency, credit company, securities company, insurance company, loan company and trust company issuing cards including a cash card, loan card and credit card and said subservient computers are computers contained in card issuing machines for issuing cards to individual customers, and which is employed as said card issued by any one of the card issuing machines and has stored thereon in magnetic form unique

authentication data that is created by said subservient computer of the money issuing machine every time the card is used.

23. An authentication-data verifying system including a plurality of computers connected with each other via communication lines with one of said computers set to function as a master computer, each of the computers subservient to said master computer comprising:

reading means for reading unique authentication data issued by any one of the subservient computers on the basis of information received from another of the subservient computers, or reading unique authentication data issued by any one of the subservient computers and recorded on a recording media;

transmitter means for transmitting the unique authentication data read by said reading means to said master computer for subsequent collation thereby; and

receiver means for receiving from said master computer a result of collation between an issuance history of the unique authentication data by each of said subservient computers registered in said master computer and the unique authentication data transmitted by said transmitter means.

24. An authentication-data verifying system including a plurality of computers connected with each other via communication lines with one of said computers set to function as a master computer, said master computer comprising:

receiver means for receiving unique authentication data transmitted by transmitter means of any one of the computers subservient to said master computer, said unique authentication data being issued by the subservient computer and read by reading means of the subservient computer; and

collator means for collating between the unique authentication data received by said receiver means and an issuance history of the unique authentication data by each of said subservient computers that is registered in said master computer; and

transmitter means for transmitting a result of collation by said collator means to receiver means of the subservient computer.

25. An authentication-data verifying system as recited in claim 23 wherein each of said subservient computers includes rejecting means which when a result of the collation by said collator means of said master computer indicates that the unique authentication

data read by said reading means is not present in the issuance history, rejects subsequent access between said subservient computer and another of said subservient computers or rejects use, in said subservient computer, of a recording media having stored thereon the unique authentication data.

26. An authentication-data verifying system as recited in claim 23 wherein each of said subservient computers includes authorizing means which when a result of the collation by said collator means of said master computer indicates that the unique authentication data read by said reading means is present in the issuance history, authorizes subsequent access between said subservient computer and another of said subservient computers or authorizes use, in said subservient computer, of a recording media having stored thereon the unique authentication data.

27. An authentication-data issuing system based on unique time, said authentication-data issuing system including a plurality of computers connected with each other via communication lines with one of said computers set to function as a master computer, each of the computers subservient to said master computer being accessed by another of the subservient computers on the basis of

unique authentication data authorized by said authorizing means recited in claim 26 or being connected with a recording media, having stored thereon the unique authentication data whose use is permitted by said authorizing means recited in claim 26,

said master computer comprising a unique time generating device including time keeping means provided in said master computer for sequentially outputting unit time values at predetermined intervals over a preset time-measuring period that begins at a given start point on a selected date and terminates at a given future end point and accumulating means for sequentially accumulating said unit time values output by said time keeping means so as to constantly measure a changing elapsed time within the time-measuring period,

each of said subservient computers comprising: receiver means for, during communication with said master computer, receiving authentication data based on an elapsed time measurement, corresponding to a given time point, indicated by said unique time generating device;

issuer means for creating and issuing unique authentication data by imparting additional data, unique to said subservient computer, to the authentication data received via said receiver means; and

transmitter means for transmitting, to said master computer, the unique authentication data created and issued by said issuer means.

28. An authentication-data issuing system as recited in claim 27 wherein said issuer means in each of said subservient computers includes imparting means for imparting, to the received authentication data, the additional data unique to said subservient computer, and said imparting means includes a unique time generating device that includes time keeping means for sequentially outputting unit time values at predetermined intervals over a preset time-measuring period that begins at a given start point on a selected date and terminates at a given future end point and accumulating means for sequentially accumulating said unit time values output by said time keeping means so as to constantly measure a changing elapsed time within the time-measuring period, and

wherein said unique time generating device in said imparting means indicates elapsed time measurements over a time-measuring period that is different from time-measuring periods of the unique time generating devices provided in said master computer

and other subservient computers and creates and issues unique authentication data peculiar to said subservient computer.

29. An authentication-data issuing system based on unique time, said authentication-data issuing system including a plurality of computers connected with each other via communication lines with one of said computers set to function as a master computer, each of the computers subservient to said master computer being accessed by another of the subservient computers on the basis of unique authentication data authorized by said authorizing means recited in claim 26 or being connected with a recording media, having stored thereon unique authentication data whose use is authorized by said authorizing means recited in claim 26,

each of said subservient computers comprising:

a unique time generating device for sequentially outputting unit time values at predetermined intervals over a preset time-measuring period that begins at a given start point on a selected date and terminates at a given future end point and accumulating means for sequentially accumulating said unit time values output by said time keeping means so as to constantly measure a changing elapsed time within the time-measuring period;

issuer means for creating and issuing unique-authentication-data updating data, corresponding to the authorized unique authentication data, on the basis of an elapsed time measurement indicated by said unique time generating device; and

transmitter means for transmitting, to said master computer, the unique-authentication-data updating created and issued by said issuer means.

30. An authentication-data issuing system based on unique time, said authentication-data issuing system including a plurality of computers connected with each other via communication lines with one of said computers set to function as a master computer, each of the computers subservient to said master computer being accessed by another of the subservient computers on the basis of unique authentication data authorized by said authorizing means recited in claim 26 or being connected with a recording media, having stored thereon unique authentication data whose use is authorized by said authorizing means recited in claim 26,

said master computer comprising:

a unique time generating device including time keeping means for sequentially outputting unit time values at predetermined intervals over a preset time-measuring period that begins at a

given start point on a selected date and terminates at a given future end point and accumulating means for sequentially accumulating said unit time values output by said time keeping means so as to constantly measure a changing elapsed time within the time-measuring period;

transmitter means for transmitting to, any one of the subservient computers, authentication data based on an elapsed time measurement, corresponding to a given time point, indicated by said unique time generating device; and

renewal means for receiving unique-authentication-data updating data that is created and issued by the subservient computer imparting additional data, unique to the subservient computer, to the authentication data from said transmitter means of said master computer, and altering the unique authentication data on the basis of the received unique-authentication-data updating data to thereby update an issuance history of the unique authentication data by said subservient computer that is registered in said master computer.

31. An authentication-data issuing system based on unique time, said authentication-data issuing system including a plurality of computers connected with each other via communication lines with

one of said computers set to function as a master computer, each of the computers subservient to said master computer being accessed by another of the subservient computers on the basis of unique authentication data permitted by said authorizing means recited in claim 26 or being connected with a recording media, having stored thereon the unique authentication data whose use is permitted by said authorizing means recited in claim 26,

said subservient computer including a unique time generating device which includes time keeping means for sequentially outputting unit time values at predetermined intervals over a preset time-measuring period that begins at a given start point on a selected date and terminates at a given future end point and accumulating means for sequentially accumulating said unit time values output by said time keeping means so as to constantly measure a changing elapsed time within the time-measuring period,

said master computer including renewal means for receiving unique-authentication-data updating data that is created and issued by the subservient computer in correspondence with the authorized unique authentication data and altering the unique authentication data on the basis of the received unique-authentication-data updating data to thereby update an issuance

history of the unique authentication data by said subservient computer that is registered in said master computer.

32. An authentication-data issuing system as recited in claim 30 wherein said subservient computer includes renewal means for altering the unique authentication data used to gain authorization to access another of the computers or to make use of the recording media, on the basis of the unique-authentication-data updating data.

33. An authentication-data issuing system as recited in claim 32 wherein said renewal means of said subservient computer receives data relating to the issuance history updated by said renewal means of said master computer, said subservient computer updating the unique authentication data on the basis of the received data relating to the issuance history.

34. An authentication-data issuing system as recited in claim 32 wherein the unique authentication data updated by said renewal means is stored in memory of the subservient computer, having accessed using last-issued unique authentication data, so that

the updated unique authentication data is used for next access to another of the subservient computers.

35. An authentication-data issuing system as recited in claim 32 wherein said renewal means alters last-issued unique authentication data, stored on the recording media used in said subservient computer, on the basis of the created and issued unique-authentication-data updating data.

36. An authentication-data issuing system as recited in claim 14 wherein the unique authentication data created and issued by said subservient computer contains the unique authentication data updated by renewal means.

37. A recording media having stored thereon unique authentication data updated by the unique-authentication-data updating data created and issued in claim 35.

38. An authentication-data issuing system as recited in claim 37 wherein the recording media having stored thereon updated unique authentication data is a ticket, a prepaid card, an electronic money, an ID card, or a card, and wherein the

subservient computer that stores the updated unique authentication data on said recording media is contained in or attached to an automatic ticket checker or a card reader/writer for the prepaid card, the ID card or the electronic money.

39. An authentication-data issuing system based on unique time or recording media issued by said authentication-data issuing system as recited in claim 38 wherein the recording media used in said subservient computer is a ticket, electronic money, prepaid card or other card, and wherein information indicative of a current balance calculated by subtracting, from a money amount stored on said recording media, a money amount spent at the time of creation of the updated unique authentication data.